

April 18, 1997

**MEMORANDUM**

**TO:** Martin Bauer, Chief  
Air Quality Permitting Bureau

**FROM:** Darrin Mehr, Associate Air Quality Engineer *DM*  
Operating Permits Section

**THROUGH:** Susan J. Richards, Air Quality Permits Manager *SJR*  
Operating Permits Section

**SUBJECT:** Technical Analysis for Amendment to Tier II Operating Permit #075-00002  
American Fine Foods (Payette)

**PURPOSE**

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 of the Rules for the Control of Air Pollution in Idaho (Rules) for issuing Operating Permits.

**FACILITY DESCRIPTION**

American Fine Foods' Payette, Idaho, facility consists of a specialty foods canning plant and a can manufacturing plant. Only emissions from the can manufacturing plant are included in the Tier II Operating Permit (OP).

The can manufacturing plant is mainly comprised of two (2) can body manufacturing lines and three (3) end lines. Emissions of regulated air pollutants occur from the coating of each can body's interior side seam and the can ends, and the oven drying of the coating. Emission point sources include one lacquer stack and two oven stacks for each of the two can manufacturing lines. Fugitive emissions occur from the use of solvents for equipment cleaning. These fugitive emissions are collected and vented through existing stacks.

**PROJECT DESCRIPTION**

This project is for the amendment of Tier II OP #075-00002 at the request of the Permittee to change the time interval of the short term emission limits from the existing pound per hour (lb/hr) to pound per day (lb/day); to increase the annual allowable volatile organic compounds (VOCs) limitation; and to alter the compliance demonstration method for VOC emissions.

**SUMMARY OF EVENTS**

DEQ received a modification or amendment request from American Fine Foods (AFF) on November 15, 1996. Processing of that application was delayed until payment for the initial issuance of Tier II OP #075-00002 was received. DEQ received payment in the amount of \$500.00 on November 25, 1996.

Processing of the request commenced upon receipt of payment for the Tier II application fee. Additional information was requested on January 2, 1997. A written response from AFF was received on January 14, 1997 (see Attachment A). The application was declared complete on January 27, 1997. Processing of the application was delayed until payment of 1996 registration fees was received on March 31, 1997.

**DISCUSSION**

1. **Emission Estimates**

Actual emission estimates were based on the VOCs and hazardous air pollutants (HAPs) contents from Material Safety Data Sheets (MSDS) and the maximum rated capacity of the can manufacturing plant equipment. Allowable emissions mission factors were generated for VOCs and glycol ethers on a production basis (number of pounds of pollutant emitted per number of cans manufactured). Emissions limits are based on worst case assumptions, as all VOCs and glycol ethers in the coatings and solvent materials are assumed to be emitted to ambient air as stack emissions (see Attachment B to review the emission spreadsheet). The increase in allowable VOCs content and annual allowable VOCs emissions was required due to a change in manufacturer's guaranteed VOC content.

### Alterations to the Tier II OP

The existing permit short-term emission limits have been altered according to the Permittee's request from hourly to daily. In accordance with the Air Quality Permitting Bureau policy of allowing maximum flexibility under the permit's intended goal of maintaining synthetic minor status, an operating scenario of continuous production, with a cleaning event of end lines 1, 2, and 3 was used to estimate worst case emissions.

The permit limitation for the side seam coating's VOC content has been increased to allow for one of many possible maximum flexibility scenarios. The content of VOCs the coatings for the can body and end line process lines are independent variables, and could be altered accordingly as long as the synthetic minor cap is maintained. The annual production limit of 300 million can units was not changed.

The solvent for cleaning the end line equipment is used intermittently for short durations, which could have caused potential hourly emissions to exceed the original permit's allowable hourly limits. End line solvent usage is not included in the VOC production emission factor.

Allowable VOC content in can body lines side seam sealant is increased to sixty-five percent (65%), and the allowable VOC content of the end lines coating was increased to seventy percent (70%). The result is an allowable emissions factor of 637 pounds of VOCs per million can units produced (lb VOCs/MM can units). Allowable glycol ethers content was increased to thirty-one percent (31%), with production emissions factor of 63.0 lb glycol ethers/MM can units.

Table 1: Allowable Emissions

POLLUTANT	Allowable Emissions (lb/day)	Allowable Emissions (T/yr)
Volatile Organic Compounds (VOCs)	954	95.7
Pollutants (HAPs): Glycol Ethers (unspecified)	90.7	9.5

Where: "T/yr" means tons per year  
"lb/day" means pounds per day

### Compliance Demonstration

The Permittee will verify compliance with emission limits by tracking the actual content of VOCs and glycol ethers in the materials used on an as-received basis. Tracking this information is required to verify that the emission factors used to develop the emission limits are valid.

Compliance with the short-term daily emission limits consists of monitoring and recording daily finished can production. Solvent usage for cleaning end lines equipment is tracked separately and must be quantified and recorded on a daily basis. The maximum daily usage of end line solvent usage was established as twenty-eight (28) lb/day (or about 4.2 gallons of Chevron Thinner 350H, with an additional five percent (5%) margin).

Allowable annual emissions are established on a rolling twelve (12) calendar month basis. Production is limited to 300,000,000 can units. Daily production is limited to 1,440,000 finished cans (a finished can consists of one body and two ends). Daily production will be recorded and compiled on a calendar month basis. The monthly totals will be summed for consecutive twelve (12) month periods. Compliance with daily and annual emission limits is verified by tracking end line solvent usage, finished can production. The validity of the can production emission factors is verified by tracking the VOC and glycol ether content of the coatings and solvents used as received.

## 2. Modeling

Short-term modeling of worst case emissions was performed using SCREEN3 (see Attachment C). The results of the modeling predicted maximum ambient air quality impact of VOC emissions at a distance of 4353 meters (2.7 miles) from the stack of 22.5 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). The ambient air quality standard for ozone (VOCs) is 0.12 parts per million (ppm) (or 235  $\mu\text{g}/\text{m}^3$ ). Impacts were estimated to be smaller at the facility boundary (approximately five (5)  $\mu\text{g}/\text{m}^3$  plus background). Assumptions include ozone formation equal to modeled VOC concentration without consideration of secondary aerosol formation. Maximum impacts were estimated to be 0.047 parts per million (ppm)--with a statewide background ozone concentration of 0.040 ppm -- at 2.7 miles from the release point. Impacts at the property boundary were negligible with this approach.

The modeling was conducted prior to incorporation of maximum flexibility, but considering the small ambient impacts predicted, the larger hourly VOC emission rate is not anticipated to exceed the ambient standard.

## 3. Area Classification

The American Fine Foods Payette, Idaho, facility is located in an area designated as attainment or unclassifiable for all criteria air pollutants.

The facility is located in AQCR 63, Zone 11.

## 4. Facility Classification

The facility is not a designated facility as defined by IDAPA 16.01.01.006.25 of the Rules.

The facility is classified as an A2 source. The facility is a nonmajor facility as defined by IDAPA 16.01.01.008.14 of the Rules.

## 5. Regulatory Review

This Tier II OP is subject to the following regulatory requirements:

- |                                       |   |
|---------------------------------------|---|
| a. <u>IDAPA 16.01.01.200</u>          | Permit to Construct;                            |
| b. <u>IDAPA 16.01.01.401</u>          | Tier II Operating Permit;                       |
| c. <u>IDAPA 16.01.01.403</u>          | Permit Requirements for Tier II Sources;        |
| d. <u>IDAPA 16.01.01.404.01(c)</u>    | Opportunity for Public Comment;                 |
| e. <u>IDAPA 16.01.01.404.01(c)(v)</u> | Consideration of Comments and Final Action;     |
| f. <u>IDAPA 16.01.01.404.04</u>       | Authority to Revise or Renew Operating Permits; |
| g. <u>IDAPA 16.01.01.406</u>          | Obligation to Comply.                           |

## FEES

Fees do not apply to this facility in accordance with IDAPA 16.01.01.470 of the Rules.

## RECOMMENDATIONS

Based on the review of the Tier II Operating Permit application materials and of applicable State of Idaho and federal regulations concerning the permitting of air pollution sources, the Bureau staff recommends that American Fine Foods, located in Payette, Idaho, be issued a Tier II Operating Permit for the sources that exist at the facility. An opportunity for public comment on the air quality aspects of the proposed permit shall be provided as required by IDAPA 16.01.01.404.01 of the Rules.

BRM\SJR\DAW:jcj...\permit\american\americoff.TAM

cc: S. West, Boise Regional Office  
Source File  
COF

**ATTACHMENT A**

***American Fine Foods Submittal***



**AMERICAN FINE FOODS**

P.O. Box 480 • 25 North 6th Street • Payette, Idaho 83661 • 208 642-9061 • FAX 208 642-2044

January 10, 1997

RECEIVED

JAN 14 1997

DIV. OF ENVIRONMENTAL QUALITY  
AIR & HAZARDOUS WASTE

Darrin Mehr, Air Quality Engineer  
Idaho Dept. of Environmental Quality  
1410 North Hilton  
Boise, ID 83706-1290

RECEIVED INCORRECT  
DATE  
STAMP  
DEC 16 1996  
DIV. OF ENVIRONMENTAL QUALITY  
AIR & HAZARDOUS WASTE

Dear Mr. Mehr,

American Fine Foods, Inc. formally requests a modification of our Tier II Air Quality Permit, #750-00002. We wish to change Appendix A-Emission Limits Hourly and Annually. This section should reflect operating requirements to a daily basis instead of hourly. This request is due to some compound use that is not dependent on manufacturing. Rather, these compounds are dependent on clean-up and maintenance. At some points in the month, a single day usage of Chevron 350 solvent will cause a violation of our per hour emission limit. This compound has a very low evaporation rate (0.13). With this in mind, 75 % of the amount of material taken from inventory is disposed into our hazardous waste stream. The worst case scenario for a single day will be 22 hours production and 2 hours clean-up using 4 gals of the Chevron 350 solvent. Please consider this modification with regards to a rolling monthly basis and annual limitations. Secondly, please review the Grace Containers Darex end compound for VOC content. The manufacturer specifications on this material was inadvertently misreported. The VOC content is slightly higher than written in the permit. If any other information is needed, please contact Jamie Griffin, Regulatory Affairs Coordinator.

Based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Richard Covington  
Director of QA/R&D Dept.  
American Fine Foods, Inc.

Attachments: MSDS for Chevron 350

Emergency Number (800)457-2022 or (415)233-3737

RECEIVED

DEC 16 1996

DIV. OF ENVIRONMENTAL QUALITY  
AIR & HAZARDOUS WASTE



# Material Safety Data Sheet

CHEVRON Thinner 350H

CPS210418

Page 1 of 8

MATERIAL ORDERED FOR:  
PACKAGE PICK-UP W.B.  
ONTARIO, OR 97914

RECEIVED

JAN 14 1997

DIV. OF ENVIRONMENTAL QUALITY  
AIR & HAZARDOUS WASTE

Print Date: October 06, 1990

This Material Safety Data Sheet contains environmental, health and toxicology information for your employees. Please make sure this information is given to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information incorporated in your MSDS. Discard any previous edition of this MSDS.

Update Section 12.

## 1. PRODUCT IDENTIFICATION

CHEVRON Thinner 350H

DANGER! - HARMFUL OR FATAL IF SWALLOWED  
- REPEATED AND PROLONGED BREATHING OF VAPOR OR CONTACT  
WITH SKIN MAY BE HARMFUL  
- MAY CAUSE SKIN IRRITATION  
- COMBUSTIBLE  
- KEEP OUT OF REACH OF CHILDREN

PRODUCT NUMBER(S): CPS210418  
PRODUCT INFORMATION: (800)582-3835

Revision Number: 13      Revision Date: 03/21/90      MSDS Number: 000059  
NDA - No Data Available      NA - Not Applicable

Prepared According to the OSHA Hazard Communication  
Standard (29 CFR 1910.1200) by the Chevron Environmental  
Health Center, Inc., P.O. Box 4054, Richmond, CA 94804.

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## 2. FIRST AID - EMERGENCY NUMBER (800)457-2022 OR (415)231-3737

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### EYE CONTACT:

No first aid procedures are required. However, as a precaution flush eyes with fresh water for 15 minutes. Remove contact lenses if worn.

### SKIN CONTACT:

Remove contaminated clothing. Wash skin thoroughly with soap and water. See a doctor if any signs or symptoms described in this document occur. Discard contaminated non-waterproof shoes and boots. Wash contaminated clothing.

### INHALATION:

If any signs or symptoms as described in this document occur, move the person to fresh air. If any of these effects continue, see a doctor.

### INGESTION:

If swallowed, give water or milk to drink and telephone for medical advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital. Note to Physician: Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

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## 3. IMMEDIATE HEALTH EFFECTS - (ALSO SEE SECTIONS 11 & 12)

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### EYE CONTACT:

This substance is not expected to cause prolonged or significant eye irritation. This hazard evaluation is based on the data from similar materials.

### SKIN IRRITATION:

The skin irritation potential of this substance has not been determined. However, it may be a moderate skin irritant so contact with the skin could cause prolonged (days) injury to the affected area. The degree of injury will depend on the amount of material that gets on the skin and the speed and thoroughness of the first aid treatment. Signs and symptoms may include pain or a feeling of heat, discoloration, swelling, and blistering. This hazard evaluation is based on data from similar materials.

### DERMAL TOXICITY:

If absorbed through the skin, this substance is considered practically non-toxic to internal organs. This hazard evaluation is based on data from similar materials.

### RESPIRATORY/INHALATION:

Signs and symptoms of central nervous system effects may include one or more of the following: headache, dizziness, loss of appetite, weakness and loss of coordination. This hazard evaluation is based on data from similar materials. Read the Additional Health Data section (12) of this document for more information.

### INGESTION:

The systemic toxicity of this substance has not been determined. However,

it should be practically non-toxic to internal organs if swallowed. Because of the low viscosity of this substance, it can directly enter the lungs if it is swallowed (this is called aspiration). This can occur during the act of swallowing or when vomiting the substance. Once in the lungs, the substance is very difficult to remove and can cause severe injury to the lungs and death. This hazard evaluation is based on data from similar materials.

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#### 4. PROTECTIVE EQUIPMENT

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##### EYE PROTECTION:

No special eye protection is usually necessary.

##### SKIN PROTECTION:

Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.

##### RESPIRATORY PROTECTION:

Wear approved respiratory protection when working with this material unless ventilation is adequate to keep airborne concentrations below recommended exposure standards.

##### VENTILATION:

Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard.

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#### 5. FIRE PROTECTION

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FLASH POINT: (TCC) 105F (41C) Min.

AUTOIGNITION: 254C (489F)

FLAMMABILITY: 1.0 - 6.0%

##### EXTINGUISHING MEDIA:

CO2, Dry Chemical, Foam and Water Fog.

NEPA RATINGS: Health 1; Flammability 2; Reactivity 0; Special NDA;

HMIS RATINGS: Health 1; Flammability 2; Reactivity 0; Other NDA; (Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association or, if applicable, the National Paint and Coating Association, and do not necessarily reflect the hazard evaluation of the Chevron Environmental Health Center. Read the entire document and label before using this product.

##### FIRE FIGHTING PROCEDURES:

Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85 F.

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency. Read the entire document.

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Revision Number: 13

Revision Date: 03/21/90

MSDS Number: 000059

NDA - No Data Available

NA - Not Applicable

**COMBUSTION PRODUCTS:**

Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

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**6. STORAGE, HANDLING, AND REACTIVITY**

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**HAZARDOUS DECOMPOSITION PRODUCTS:**

NDA.

**STABILITY:**

Stable.

**HAZARDOUS POLYMERIZATION:**

Polymerization will not occur.

**INCOMPATIBILITY:**

May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**SPECIAL PRECAUTIONS:**

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. DO NOT USE OR STORE near flame, sparks or hot surfaces. USE ONLY IN WELL VENTILATED AREA. Keep container closed. DO NOT weld, heat or drill container. Replace cap or bung. Emptied container still contains hazardous or explosive vapor or liquid. CAUTION! Do not use pressure to empty drum or explosion may result.

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**7. PHYSICAL PROPERTIES**

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**SOLUBILITY:** Soluble in hydrocarbon solvents; insoluble in water.

**APPEARANCE:** Colorless liquid.

**BOILING POINT:** 325 - 404°F (Range)

**MELTING POINT:** NA

**EVAPORATION:** 0.13 (BU AC=1)

**SPECIFIC GRAVITY:** 0.795 @ 15.6/15.6C

**VAPOR PRESSURE:** 2.2mm Hg @ 20C (68F) of VOC

**PERCENT VOLATILE (VOLUME %):** 99+%

**VOLATILE ORGANIC COMPOUNDS (VOC):**

795 g/liter (Max.)

**VAPOR DENSITY (AIR=1):** 5.0

**VISCOSITY:** 1.046 cSt @ 37.8C

**MOLECULAR WEIGHT:** 144 (Avg.)

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**8. ENVIRONMENTAL CONCERNS, SPILL RESPONSE AND DISPOSAL**

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**CHEMTREC EMERGENCY PHONE NUMBER:** (800) 424-9300 (24 hour).

**SPILL/LEAK PRECAUTIONS:**

Certain geographical areas have air pollution restrictions concerning the use of materials in work situations which may release volatile components to the atmosphere. Air pollution regulations should be studied to determine if this material is regulated in the area where it is to be used.

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Revision Number: 13

Revision Date: 03/21/90

MSDS Number: 000059

NDA - No Data Available

NA - Not Applicable

Eliminate all open flame in vicinity of spill or released vapor. Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Protective Equipment. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

**DISPOSAL METHODS:**

Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

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**9. EXPOSURE STANDARDS, REGULATORY LIMITS AND COMPOSITION**

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**COMPOSITION COMMENT:**

All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

The Chevron recommended TLV for this material is 125 ppm.

The percent compositions are given to allow for the various ranges of the components present in the whole product and may not equal 100%.

**PERCENT/CAS# COMPONENT/REGULATORY LIMITS**

100.0 % CHEVRON Thinner 350H

**CONTAINING**

DISTILLATES, HYDROTREATED LIGHT

CAS64742478

LIGHT AROMATIC SOLVENT NAPHTHA

CAS64742956

7.0 % ALKYL BENZENES

CAS68515253..

**INCLUDING**

2.0 % 1,2,4-TRIMETHYLBENZENE

CAS95636

A toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.  
SARA 302/304 RQ= POUNDS TPQ=10,000 POUNDS

2.4 % CUMENE

CAS98828

A toxic chemical subject to the reporting requirements of

Section 313 of Title III of the Superfund Amendments and  
Reauthorization Act of 1986 and 40 CFR Part 372.  
50ppm ACGIH TLV  
50ppm OSHA PEL  
CERCLA 302.4 RQ=5000 POUNDS

0.8 % TRIMETHYLBENZENES  
CAS108578

TLV - Threshold Limit Value	PEL - Permissible Exposure Limit
STEL - Short-term Exposure Limit	TPQ - Threshold Planning Quantity
RQ - Reportable Quantity	CPS - CUSA Product Code
CC - Chevron Chemical Company	CAS - Chemical Abstract Service Number

## 10. REGULATORY INFORMATION

DOT SHIPPING NAME: PETROLEUM NAPHTHA  
DOT HAZARD CLASS: COMBUSTIBLE LIQUID  
DOT IDENTIFICATION NUMBER: UN1255

SARA 311 CATEGORIES:

1.	Immediate (Acute) Health Effects; YES
2.	Delayed (Chronic) Health Effects; YES
3.	Fire Hazard; YES
4.	Sudden Release of Pressure Hazard; NO
5.	Reactivity Hazard; NO

WHEN A COMPONENT OF THIS MATERIAL IS SHOWN IN THIS SECTION, THE  
REGULATORY LIST ON WHICH IT APPEARS IS INDICATED.

MESITYLENE	02,26,28,
1,2,4-TRIMETHYLBENZENE	01,02,10,11,26,28,
CUMENE	01,02,10,11,14,17,21,24,26,28,

### REGULATORY LISTS:

01=SARA 313	02=MASS RTK	03=NTP Carcinogen
04=CA Prop. 65	05=MI 406	06=IARC Group 1
07=IARC Group 2A	08=IARC Group 2B	09=SARA 302/304
10=PA RTK	11=NJ RTK	12=CERCLA 302.4
13=MN RTK	14=ACGIH TLV	15=ACGIH STEL
16=ACGIH Calculated TLV	17=OSHA PEL	18=OSHA STEL
19=Chevron TLV	20=EPA Carcinogen	21=TSCA SECT 4
22=TSCA SECT 5 SNUR	23=TSCA SECT 6 RULE	24=TSCA SECT 12 EXPORT
25=TSCA SECT 8A CAIR	26=TSCA SECT 8D REPORT	27=TSCA SECT 8E
28=Canadian WHMIS		

## 11. PRODUCT TOXICOLOGY DATA

### EYE IRRITATION:

NDA. The hazard evaluation was based on data from similar materials.

Revision Number: 13      Revision Date: 03/21/90      MSDS Number: 000059  
NDA - No Data Available      NA - Not Applicable

**ATTACHMENT B**

***DEQ - Generated Emission***

***Estimation Spreadsheet***

***and***

***Accompanying Analysis***

Source: American Fine Foods

Payette, Idaho

Project: Tier II OP #075-00002 Permit - Revised Emissions Spreadsheet Incorporating Maximum Flexibility and daily allowable short term limits.

**Emissions Factor Development : 1994 Actual Solvents and Coatings Usage****Can Manufacturing Plant Only**

All information is from the Permittee's application and modification request and incorporation of Maximum Flexibility Policy

Coating and Solvents	1994 Amount Used (pounds)	1994 Production (#)	Cans or Ends	Coatings Production Based Usage	Units (lb/MM cans) (lb/MM ends)	Spreadsheet Reference
443 X 427 KO Side Seam	21,850	112,896,365	cans	193.54	(lb/MM cans)	Sealant
DAREX EXP9385E-56 *1	61,500	228,209,915	ends	269.49	(lb/MM ends)	End Line Coating
Heptane	7,098	228,209,915	ends	31.10	(lb/MM ends)	Solvent #1
Methyl Ethyl Ketone	366	112,896,365	cans	3.24	(lb/MM cans)	Solvent #2
Chevron Thinner 350	365	228,209,915	ends	1.60	N/A	Equip. Solvent
Petrochem 401	35	112,896,365	cans	0.31	(lb/MM cans)	Solvent #3

Project Equipment Capacities		
	CANS	ENDS
Hourly Capacity	60,000	132,000
Daily Capacity	1,440,000	3,168,000
Annual Permit Capacity	300,000,000	660,000,000

\*1: Grace Products DAREX coating was originally submitted as having 43% VOCs

The DAREX coating's MSDS for SLC 9385-E contains up to 44% VOCs. (This is the coating the facility uses, requiring a permit amendment)

**Change in Permitting Method:** Maximum Flexibility above what was applied for shall be incorporated into the permit.

\*2: The Chevron Thinner 350 is named Chevron Thinner 350H by MSDS and is not part of the production-based operation per the Permittee and could potentially cause an exceedance of the original Tier II permit's pound per hour limitations. Existing solvent use tracking lends itself to incorporating a daily log of gallons used for cleaning End Lines 1, 2, and 3.

**CANS:**

Rated Capacity = 60,000 Cans/hr \* 8760 hr/yr = 525,600,000 cans/yr

**ENDS:**

Rated Capacity = 132,000 Ends/hr \* 8760 hr/yr = 1,156,320,000 ends/yr

**MAXIMUM FLEXIBILITY POLICY:**

Daily Capacity = 60,000 cans/hr at 24 hr/day =

1,440,000 can units per day

Requested Annual Capacity = 300,000,000 can units

**POLLUTANT - BASED EMISSIONS AND EMISSION FACTORS**

Source and Coating/Solvent	Maximum Rated Capacity	Specific Pollutant	Content (%)	"Actual" Emission Factor	Hourly Emissions (lb/hr)	24 hr production Daily Emissions (lb/day)	Requested Annual Emissions (Ton/yr)	Permit Basis (additional 5%)		
								Hourly Emissions (lb/hr)	24 hr production Daily Emissions (lb/day)	Requested Annual Emissions (Ton/yr)
<b>Production Based Emission</b> Can Body Lines 1, 2 Sealant	<b>Factor:</b> CANS/Minute			<b>lb/MM cans</b>						
		VOCs	65	125.80	7.55	181.15	18.87	7.93	190.21	19.81
		Glycol Ethers	31	60.00	3.60	86.40	9.00	3.78	90.72	9.45
Solvent #2	1000	VOC	100	3.24	0.19	4.67	0.49	0.20	4.90	0.51
Solvent #3	1000	VOC	100	0.31	0.02	0.45	0.05	0.02	0.47	0.05
<b>End Lines 1,2, and 3</b> Coating	<b>ENDS/Minute</b>			<b>lb/MM ends</b>						
		VOCs	70	188.64	24.90	597.62	62.25	26.15	627.50	65.36
Solvent #1	2200	VOC	100	31.10	4.11	98.53	10.26	4.31	103.46	10.78
<b>Solvent to be Tracked Separately:</b>										
Equipment Solvent		VOCs	100	N/A	13.26	26.52	0.18	13.92	27.85	0.20
Permit allowable usage = 28 lb VOC/day and 400 lb/year (10% additional allowance)										

N/A : Not applicable. This is a short term event that cannot be given a production based factor emission estimation spread over the course of the day's operations.

Equipment Solvent (current operations use Chevron Thinner 350H) will be limited to 28 lb/day and 400 lb/year, per American Fine Foods January 14, 1997 submittal. of worst case usage.

End Line cleaning operation is not part of a steady-state process. Emissions are collected and vented to the atmosphere without destruction.

**MAXIMUM FLEXIBILITY CASE: Allowable Emissions and End Line Solvent Usage**

Source	Maximum Allowable Daily Production (can units)	Maximum Allowable Annual Production (can units)	Production Emission Factor (lb VOC per MM can units)	Daily Permit Emission Limitation (lb VOC/day)	Annual Permit Limitation (ton VOC/yr)	Production Emission Factor (lb glycol ethers /MM can units)	Daily Permit Limitation (lb glycol ethers/day)	Annual Permit Limitation (Tons glycol ethers/year)
Can Manufacturing Plant Production Emission Limits	1,440,000	300,000,000	637	927	95.5	63.0	90.7	9.45
End Lines Solvent Usage			N/A	28	0.2			

**Totals:                      954                      95.7                      90.7                      9.5**

**Notes:**

One Can Unit = 1 can body (or can) and 2.2 can ends as established in the original permit application and Tier II permit.

The permit limit Emission factor for VOC emissions is just that -- production rate-related. It does not take into account the extreme short term variability of the Chevron Thinner 350H End Lines 1,2,3 cleaning emissions (Chevron 350H is referred to as Equipment Solvent).

Short Term Emissions Limit: Pound per day (maximum including the solvent use on End Lines 1,2,3)

Short Term Compliance Demonstration Method: Daily tracking of Production AND End Line Solvent Usage -- similar to original permit.

Long Term Emissions Limit: Annual limits (Ton per year) on VOCs and glycol ethers based on the production based emissions factors except for VOC emissions from End Line Solvent use.

Long Term Compliance Demonstration Method: Daily tracking of production and Chevron Thinner 350 solvent usage recorded daily. The daily summations are to be included in a calendar month "summary." These monthly summaries are then to be tracked against the rolling annual VOC and glycol ether emission limitations.

**PERMIT LIMITATIONS**

Permit Limitations are to be based on the annual requested production of 300 million cans per year and the emission limits for glycol ethers and volatile organic compounds, incorporating maximum flexibility policy. This yields annual limits of 9.45 Tons per year glycol ethers (or 9.5) and 96.2 tons per year for VOCs.

Short term emission limits have been modified from the original permit's hourly limits to the requested daily enforceable limits. The resulting limits are

Allowable daily production shall not exceed 1,440,000 finished can units.

Allowable annual production is limited to 300,000,000 finished can units.

If Chevron Thinner 350H solvent usage is used, its use is limited to 4.2 gallons per day or 60 gallons per year (per Permittee's submittal).

Tier II OP 075-00002 will incorporate a 28 lb VOC /day emission limit and 0.2 T/yr annual Limit for Equipment Cleaning (applied for as End Line cleaning)

**ATTACHMENT C**

***SCREEN3 Modeling Results***

***and***

***Accompanying Analysis***

01/17/97  
11:07:04

\*\*\* SCREEN3 MODEL RUN \*\*\*  
\*\*\* VERSION DATED 95250 \*\*\*

American Fine Foods VOC modeling

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	4.11000
STACK HEIGHT (M)	=	9.0000
STK INSIDE DIAM (M)	=	.1520
STK EXIT VELOCITY (M/S)	=	1100.0000
STK GAS EXIT TEMP (K)	=	293.0000
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	.0000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	.0000
MIN HORIZ BLDG DIM (M)	=	.0000
MAX HORIZ BLDG DIM (M)	=	.0000

BUOY. FLUX = .000 M\*\*4/S\*\*3; MOM. FLUX = 6988.959 M\*\*4/S\*\*2.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\*\*\*  
\*\*\* SCREEN AUTOMATED DISTANCES \*\*\*  
\*\*\*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.1002E-03	6	1.0	1.0	10000.0	97.33	16.36	16.36	NO
100.	1.267	6	1.0	1.0	10000.0	97.33	25.56	25.34	NO
200.	3.127	4	20.0	20.0	6400.0	34.08	17.13	11.12	NO
300.	10.38	4	20.0	20.0	6400.0	34.08	23.72	14.06	NO
400.	16.61	4	20.0	20.0	6400.0	34.08	30.31	16.87	NO
500.	20.08	4	20.0	20.0	6400.0	34.08	36.85	19.65	NO
600.	21.18	4	20.0	20.0	6400.0	34.08	43.31	22.39	NO
700.	20.84	4	20.0	20.0	6400.0	34.08	49.71	25.08	NO
800.	19.78	4	20.0	20.0	6400.0	34.08	56.03	27.72	NO
900.	18.41	4	20.0	20.0	6400.0	34.08	62.30	30.32	NO
1000.	16.97	4	20.0	20.0	6400.0	34.08	68.50	32.88	NO
1100.	16.04	4	15.0	15.0	4800.0	42.44	74.92	35.44	NO
1200.	15.11	4	15.0	15.0	4800.0	42.44	81.00	37.33	NO
1300.	14.22	4	15.0	15.0	4800.0	42.44	87.04	39.18	NO
1400.	13.38	4	15.0	15.0	4800.0	42.44	93.04	40.99	NO
1500.	13.63	5	4.0	4.0	10000.0	70.08	75.73	32.94	NO
1600.	14.28	5	3.5	3.5	10000.0	72.86	80.25	34.34	NO
1700.	14.91	5	3.0	3.0	10000.0	76.23	84.78	35.81	NO
1800.	15.50	5	3.0	3.0	10000.0	76.23	89.07	36.75	NO
1900.	16.10	5	2.5	2.5	10000.0	80.44	93.60	38.31	NO
2000.	16.64	5	2.0	2.0	10000.0	85.96	98.19	40.06	NO
2100.	17.09	5	2.0	2.0	10000.0	85.96	102.42	40.86	NO
2200.	17.50	5	2.0	2.0	10000.0	85.96	106.63	41.64	NO
2300.	17.86	5	1.5	1.5	10000.0	93.71	111.29	43.61	NO

2400.	18.28	5	1.5	1.5	10000.0	93.71	115.46	44.35	NO
2500.	18.66	5	1.5	1.5	10000.0	93.71	119.61	45.09	NO
2600.	19.00	5	1.5	1.5	10000.0	93.71	123.76	45.82	NO
2700.	19.30	5	1.5	1.5	10000.0	93.71	127.90	46.54	NO
2800.	19.62	5	1.0	1.0	10000.0	105.97	132.71	49.14	NO
2900.	20.00	5	1.0	1.0	10000.0	105.97	136.80	49.82	NO
3000.	20.34	5	1.0	1.0	10000.0	105.97	140.88	50.50	NO
3500.	21.68	5	1.0	1.0	10000.0	105.97	161.15	53.79	NO
4000.	22.46	5	1.0	1.0	10000.0	105.97	181.19	56.96	NO
4500.	22.52	5	1.0	1.0	10000.0	105.97	201.00	59.64	NO
5000.	22.35	5	1.0	1.0	10000.0	105.97	220.61	62.22	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:									
4353.	22.53	5	1.0	1.0	10000.0	105.97	195.16	58.86	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)  
DWASH=NO MEANS NO BUILDING DOWNWASH USED  
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED  
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED  
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3\*LB

\*\*\*\*\*  
\*\*\* SCREEN DISCRETE DISTANCES \*\*\*  
\*\*\*\*\*  
\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

DIST	CONC		U10M	USTK	MIX HT	PLUME	SIGMA	SIGMA	
(M)	(UG/M**3)	STAB	(M/S)	(M/S)	(M)	HT (M)	Y (M)	Z (M)	DWASH
-----	-----	----	-----	-----	-----	-----	-----	-----	-----

DWASH= MEANS NO CALC MADE (CONC = 0.0)  
DWASH=NO MEANS NO BUILDING DOWNWASH USED  
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED  
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED  
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3\*LB

\*\*\*\*\*  
\*\*\* SUMMARY OF SCREEN MODEL RESULTS \*\*\*  
\*\*\*\*\*

CALCULATION	MAX CONC	DIST TO	TERRAIN
PROCEDURE	(UG/M**3)	MAX (M)	HT (M)
-----	-----	-----	-----
SIMPLE TERRAIN	22.53	4353.	0.

\*\*\*\*\*  
\*\* REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS \*\*  
\*\*\*\*\*

SCREEN 3 Inputs:

$$\left(32.6 \frac{\text{lb}}{\text{hr}}\right) \left(\frac{454 \text{ g}}{\text{lb}}\right) \left(\frac{1 \text{ hr}}{3600 \text{ sec}}\right) = \boxed{4.11 \frac{\text{gram}}{\text{sec}}}$$

29.5 ft Elevation  $\rightarrow$  9.0 m

0.5 ft Diameter  $\rightarrow$  0.152 m

$$K = ^\circ\text{C} + 273.15$$

at Ambient:  $^\circ\text{C} = 20^\circ\text{C}$   $293.15 \text{ K}$ .

IDAPA 16.01.01.575. 03 Ozone Primary & Secondary

0.12 ppm OR  $235 \mu\text{g}/\text{m}^3$  -- maximum one hour concentration.

Not to be exceeded more than once per year

Maximum ambient concentration (Impact only)

was  $22.53 \mu\text{g}/\text{m}^3$  @ 4353 m (2.7 miles away from stack).

CONCENTRATION AT FENCE LINE. ASSUMED FOR 1989 USDA ANALYSIS.

$$(2.86 \text{ inches}) \left(\frac{80 \text{ ft}}{\text{inch}}\right) = 228 \text{ ft}$$

AT 328 ft:  $1.27 \mu\text{g VOC}/\text{m}^3$

AT 3 ft:  $0.001 \mu\text{g}/\text{m}^3$

$\therefore$  AT 228 ft, CONCENTRATION AT FENCE LINE IS  $< 1 \frac{\mu\text{g}}{\text{m}^3}$

NEGLECTABLE IMPACT. AT CLOSEST PROPERTY LINE.

AT FAR CORNER BY PLOT PLAN (ONLY A PLOT PLAN PROVIDED).

$$(9.1 \text{ in}) \left(\frac{80 \text{ ft}}{\text{in}}\right) = 730 \text{ ft} \approx 5 \mu\text{g}/\text{m}^3 \text{ VOCs. NEGLECTABLE}$$

REPRESENTATIVE VOC WILL BE ASSUMED TO BE:

BENZENE: MOLECULAR WEIGHT: 78 lb/lbmole.

40 ppb Background in Idaho.

Standard is 120 ppb (0.12 ppm)

Modeled impact 2.7 miles downwind is  $22 \mu\text{g}/\text{m}^3$

$$\text{ppm} = \left( 22.5 \frac{\mu\text{g}}{\text{m}^3} \right) \left( \frac{0.02404}{\text{Molecular Wt}} \right)$$

$$(\text{PPM})_{\text{volume}} = \left( 22.5 \frac{\mu\text{g}}{\text{m}^3} \right) \left( \frac{0.02404}{78 \text{ lb/lbmol}} \right)$$

$$(\text{PPM})_{\text{vol}} = 0.0069 \text{ ppm.}$$

If 40 ppb background is given in weight reference (not a volume)

$$\Rightarrow 40 \text{ ppb} = 0.040 \text{ ppm.}$$

$$\begin{aligned} \text{Background Concentration} + \text{Max Modelled Concentration} &= (0.040 \text{ ppm}) + 0.0069 \text{ ppm} \\ &= \underline{0.047 \text{ ppm.}} \text{ WORST CASE.} \end{aligned}$$

WORST CASE ASSUMES VOC impact is 1:1 ratio (NO SECONDARY AEROSOL FORMATION, ACTS AS PARTICLE)

MODEL USED WAS SCREEN3 NOT ISC.

IF THIS IS WORST CASE, FENCELINE IMPACTS ARE MINIMAL ACCORDING TO THIS ROUGH ESTIMATION METHODOLOGY.